

# Introduction to Computer Science

## INFO-2350 Course Syllabus Fall 2022

“Responsibility for learning belongs to the student, regardless of age” Robert Martin

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## Your Instructor

**William A Loring**

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**E-mail:** [loringw@wncc.edu](mailto:loringw@wncc.edu) (Preferred contact method)

**Scottsbluff Office Hours:** MW 1-2 pm, M 5-6 pm, TTh 10-11 am or by appointment

**Online Office Hours:** By appointment. [www.calendly.com/loringw](http://www.calendly.com/loringw)

"There are no stupid questions. Ask questions whenever something isn't completely clear. You can't remember what you don't understand."

Tolerate chaos, uncertainty, and vagueness. "Figuring it out" is part of learning.

## Class Information

Class Location: Scottsbluff Campus, Room D1

Time: Tue & Thu, 12:30-1:45 pm

## Pre-requisite

MATH-1010 or Accuplacer and INFO-1255 or INFO-1510

## Catalog Description

This course is a study of computer programming, problem solving methods, and accepted software development practices using Java, a high-level programming language. Topics include the fundamentals of Java procedural programming, object-oriented programming, and introduction of some advanced features of Java. This course prepares the student for further study in Computer Science.

3.0 semester hours

(3/45/0/0/0/0) See Figure 1

## Course Objectives

Using this course as an instructional medium, the instructor will:

1. Define and explain common Java syntax, terms, and concepts.
2. Explain and demonstrate how to design, develop, and compile Java programs.
3. Demonstrate and model how to solve programming problems based on case studies.
4. Model self-directed and lifelong learning.

## Student Learning Outcomes

Upon completion of this course, the student will be able to:

1. Recognize and define common Java syntax, terms, and concepts. [GE 1, 2]
2. Create and compile example Java programs. [GE 2]
3. Demonstrate the concepts of object-oriented programming, problem solving, and debugging by creating functional Java applications based on case studies. [GE 2]
4. Self-direct their learning while gaining an ongoing interest in learning more about programming. [GE 5]

## Instructional Materials

All instructional materials, readings, and tutorials are in the Blackboard course. There is not a book required for this class.

OER (Open Educational Resources) are freely accessible, openly licensed text, media, and other digital assets that are useful for teaching, learning, and assessing as well as for research purposes. This is a concept that allows for open-source sharing of educational materials for no cost.

There is a wealth of free educational material available for programming.

Some of the materials used in this course are adapted from OER (Open Educational Resources) resources. The OER materials used in this course are adapted under Creative Commons license <https://creativecommons.org/licenses/by-nc-sa/3.0/us>.

The following OER book will be used for this course.

- [Think Java, How to Think Like a Computer Scientist](#), Allen Downey and Chris Mayfield

## Course Schedule

Course content may vary from this outline to meet the needs of this group.

<b>Week</b>	<b>Activities</b>	<b>Assignments</b>
Week 1 08/22 - 08/28	TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording  Introduction to Course  Introduction to Blackboard  Installing the JDK  Chapter 1: Creating Java Programs	Getting Started Activities in Blackboard  Professional Communication  Introduction Discussion  Getting Started Quiz  Visualize: What is Computer Programming  Chapter 1 Two Truths and a Lie  Chapter 1 You Do It  Chapter 1 Favorite Song  Chapter 1 Burma Shave
Week 2 08/29 - 09/04	Chapter 2: Using Data  TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording	Chapter 1 Random Guess  Chapter 1 Debugging Exercises 1, 2  Chapter 1 Quiz  Visualize: Order of Operations  Chapter 2 Two Truths and a Lie  Chapter 2 You Do It  Pseudocode Tutorial  Pseudocode Quiz  Chapter 2 Inches to Feet
Week 3 09/05 - 09/11	Chapter 2: Using Data  Appendix C Page 939 (Using the DecimalFormat class)  TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording	Chapter 2 Debugging Exercises 1, 2  Chapter 2 Change Counter  Chapter 2 Random Guess  Git Going with GitHub  Chapter 2 Quiz

Week 4 09/12 - 09/18	Chapter 3: Using Methods, Classes, and Objects  TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording	Visualize: Objects  Chapter 3 You Do It  Chapter 3 Inch Conversion (GitHub)  Chapter 3 Paint Calculator  Install C++ Compiler
Week 5 09/19 - 09/25	Chapter 3: Using Methods, Classes, and Objects  TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording	Chapter 3 Debugging Exercises 1, 2  Chapter 3 Pick Two Cards (GitHub)  C++ Assignment – Meters to Feet  Chapter 3 Quiz  Guild Project Team Process
Week 6 09/26 - 10/02	Chapter 4: More Object Concepts  TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording  Exit Ticket Discussion	Chapter 4 You Do It  Chapter 4 Bookstore Billing  Week 6 CPP Activities  GitHub KanBan (Project) Board  Guild Project
Week 7 10/03 - 10/9	Chapter 4: More Object Concepts  TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording	Chapter 4 Debugging Exercises 1, 2  Chapter 4 Sandwich Shop  Week 7 CPP Activities  Chapter 4 Quiz  Guild Project

<p>Week 8</p> <p>10/10 – 10/16</p> <p>Fall Break</p>	<p>Chapter 5: Making Decisions</p> <p>Visualize: Decisions</p> <p>Visualize: AND or NOT</p> <p>TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording</p>	<p>Chapter 5 You Do It</p> <p>Chapter 5 Random Guess</p> <p>Chapter 5 EvenOdd</p> <p>Week 8 CPP Activities</p>
<p>Week 9</p> <p>10/17 - 10/23</p>	<p>Chapter 5: Making Decisions</p> <p>TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording</p>	<p>Chapter 5 Roshambo</p> <p>Week 9 CPP Activities</p> <p>Chapter 5 Quiz</p> <p>Guild Project</p>
<p>Week 10</p> <p>10/24 - 10/30</p>	<p>Chapter 6: Looping</p> <p>Chapter 1: Introduction to Programming Python</p> <p>Visualize: Loops</p> <p>TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording</p> <p>Exit Ticket Discussion</p>	<p>Install Python</p> <p>Chapter 2 Python Activities</p> <p>Chapter 6 Team Stats</p> <p>Week 10 CPP Activities</p> <p>Guild Project</p>
<p>Week 11</p> <p>10/31 - 11/06</p>	<p>Chapter 6: Looping</p> <p>TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording</p>	<p>Chapter 6 Random Guess</p> <p>Chapter 6 Roshambo</p> <p>Week 11 CPP Activities</p> <p>Chapter 6 Quiz</p> <p>Guild Project</p>

Week 12 11/07 - 11/13	Chapter 7: Characters, Strings, and the StringBuilder  TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording  Exit Ticket Discussion	Chapter 7 You Do It  Chapter 7 Acronym  MeowFacts Web API Tutorial  Week 12 CPP Activities  Guild Project
Week 13 11/14 - 11/20	Chapter 7: Characters, Strings, and the StringBuilder  TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording	Week 13 CPP Activities  Chapter 7 Quiz  Guild Project
Week 14 11/21 11/27  Thanks giving	Chapter 8: Arrays  Visualize: Arrays  TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording	Chapter 8 Sandhills Car Care  Week 14 Python Activities – GUI with Tkinter
Week 15 11/28 - 12/04	Chapter 8: Arrays  Visualize: Arrays  TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording  Developer Discussion	PolyAngle in Python Tkinter  Week 15 CPP Activities  Guild Project
Week 16 12/05 - 12/9	Chapter 8: Arrays  TTH 12:30-1:45 pm Class: Face to Face, Live Streaming, or Recording  Lessons Learned Discussion	Python OpenWeatherMap API  Week 16 CPP Activities Hello World C++ on Linux  Guild Project
Finals		Guild Final Project Presentation

12/13 - 12/17		
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## Academic Integrity

The academic integrity policy for this course includes the Institutional Academic Integrity Policy listed at the end of this document.

1. Do your own work.
2. You can ask for help if you get stuck. It is OK to have a study buddy to help with problems or issues. It is not OK to turn in the same assignment as someone else.
3. If you use someone else's work for a small quote or reference, cite the source.
4. Use your own words.
5. Do your own work. We are here to learn. You can't learn without doing the work.

**Minor Violations:** First offense: Grade of 0 for the assignment.

**Major Violations:** Second offense: Grade of F for the class.

**Do your own work.**

## Institutional Credit Hours and Out-of-Classroom Preparation

WNCC credit hour assignments comply with the Federal Credit Hour definition.

At WNCC, a semester **credit hour** is normally granted for the satisfactory completion of one 50-minute session (contact hour) of classroom instruction per week for a semester of not less than 15 weeks; two to three contact hours are required for laboratories to award a single credit hour. Other differences may occur depending on instructional delivery.

On average, for lecture courses, one credit hour requires three hours of effort on the part of the student per week – **one hour of class and two hours of out-of-class time to accomplish readings and out-of-class assignments in preparation for successful completion of the course requirements.** Some students may require more preparation time for some classes and for some classes, less time.

For a three-hour lecture course, a student should plan on a minimum of three hours a week in class and a minimum of six hours a week spent on out-of-class preparation.



## Institutional Academic Integrity

Academic integrity forms a fundamental bond of trust between colleagues, peers, teachers, and students, and it underlies all genuine learning. At WNCC, there is no tolerance for plagiarism or academic dishonesty in **any** form, including unacknowledged "borrowing" of proprietary material, copying answers or papers, using crib sheets, unauthorized help during exams, altering tests, or passing off someone else's work as one's own.

### **A breach of ethics or act of dishonesty can result in:**

- failure of a paper or an exam within a course (instructor level)
- failure of an entire course (institutional level)
- suspension or expulsion from the college (institutional level)

Any form of academic dishonesty represents a grave breach of personal integrity and of the rules governing WNCC's community of learners. **Academic dishonesty includes, but is not limited to:**

- cheating in any form
- plagiarizing in any form
- aiding someone else in cheating or plagiarizing

## Equal Access

Western Nebraska Community College seeks to make all programs and services, including electronic and information technology, accessible to people with disabilities. In this spirit, and in accordance with the provisions of Sections 504 and 508 of the Rehabilitation Act and the Americans with Disabilities Act (ADA), WNCC provides students, faculty, staff, and visitors with reasonable accommodations to ensure equal access to the programs and activities of the college. For assistance or further information, students with disabilities should contact the Counseling Director at (308) 635-6090. Helpful information is also available in the "*Transition Guide for Students with Disabilities*" on the WNCC Web site under Disability Services.

## COVID 19

### **Face Coverings**

For the Fall 2021 semester, WNCC requires all students, faculty, and staff to wear face coverings in classrooms, labs, meeting, and conference rooms for the protection of the

campus communities. All students are required to adhere to this policy unless arrangements have been made for accommodations with the Counseling Director (who also serves as the disability officer) (308.635.6090). Deviation from this policy may be subject to sanction by the Student Code of Conduct. Please make sure that you arrive each day with your face covering on before you enter the classroom, lab, meeting or conference room. It must remain on your face, covering your mouth and nose, until you leave the designated room.

## **Title IX Statement**

Title IX of the Education Amendments of 1972 prohibits discrimination on the basis of sex in any educational institution that receives federal funding. WNCC strictly prohibits any form of sexual harassment, which includes sexual harassment, sexual assault, dating violence, domestic violence, and stalking. All reported incidents will be thoroughly investigated and those found responsible dealt with as necessary, whether criminally charged or handled through the College's sexual harassment grievance and investigation procedure. College policy also prohibits retaliation against a person for reporting sexual harassment or participating in the investigation or resolution of such a complaint. Help and support are available for any student who experiences any form of sexual harassment.

Questions or concerns about a student's rights, the resources available, or to file a Title IX complaint, should contact the College's Title IX Coordinator at 308.635.6105. More information about reporting options and resources at WNCC and the community are available at [www.wncc.edu/about-wncc/consumer-information](http://www.wncc.edu/about-wncc/consumer-information).

If a student wishes to speak to someone confidentially, they should contact the Counseling Director at the WNCC Counseling Center on the Scottsbluff campus or by calling 308.635.6090. Appointments are available at all WNCC locations.

## **Discrimination, Harassment, and Retaliation**

WNCC is committed to providing a college environment free from harassment, discrimination, and retaliation, and all students, employees, volunteers, and visitors are prohibited from participating in any harassment, discrimination, or retaliation based on any protected class status.

If a student feels that he or she is the victim of discrimination, harassment, or retaliation, it is important to remember that there are supportive people at WNCC who are resources for discussing and helping to clarify what constitutes discrimination, harassment, or retaliation

and the action steps that can be taken. The College has established both formal and informal procedures to report complaints.

Students should not wait to report conduct of concern until harassment becomes sufficiently serious (i.e., severe, pervasive, or persistent) to create a hostile environment. Off-campus harassment, misconduct, or violence that creates a hostile environment on campus should be brought to the attention of the College.

To file a complaint or get help, students should seek assistance through WNCC's Institutional Civil Rights Officer and Title IX Coordinator (308-635-6105). More complete information about the reporting process can be found in the WNCC Student Handbook.

## **Student Code of Conduct**

As an educational institution of higher education, WNCC seeks to provide the best educational environment for its students, faculty, and staff. It is mindful that academic freedom is an essential element of college life. The purpose of the Student Code of Conduct is to help ensure a safe and educationally productive environment for students, employees, and visitors. Conduct that adversely affects a student's responsible membership in the academic community shall result in appropriate disciplinary action.

Please see the *Student Handbook* ([www.wncc.edu/student-life/student-handbook](http://www.wncc.edu/student-life/student-handbook)) for a complete copy of the WNCC Student Code of Conduct.

## **Basic Needs Security**

Students who believe their academic performance is being negatively impacted due to difficulty accessing sufficient food or finding a safe and stable place to live are encouraged to contact the Dean of Students' office at 308-635-6123. This office will put students in contact with community partners who may be able to aid in these areas.

## **Audio/Visual Recordings**

Except where a student is entitled to make an audio or video recording of class lectures and discussions as an educational accommodation determined through the student's interactive process with college disability services, a student may not record lectures or classroom discussions unless written permission from the class instructor has been obtained and all students in the class as well as guest speakers have been informed that audio/video recording may occur.

A student granted permission to record may use the recording only for his or her own study and may not publish or post the recording on YouTube or any other medium or venue without the instructor's explicit written authorization.

**Figure 1: Explanation of Credit Diagram**

